



REDUCE RAW MATERIAL COSTS FOR YOUR INTEGRATED STEEL WORKS



THE CHALLENGE

Steel producers face a fast moving market that forces them to keep costs down while materials constantly change. Although their final product must keep a constant quality, steel producers have to deal with different qualities of raw materials, with a very volatile price. In order to reduce the production cost of steel, N-SIDE, a leader in Steel

Industry optimization models design, has developed an integrated approach based on the latest optimization techniques. This approach allows steel producers to keep production costs for integrated steel works as low as possible even when inputs vary.



www.n-side.eu

THE APPROACH

SCOOP (Steel Cost Optimization) is an application that can be customized for the special needs of any steel company. This application allows steel producers to find the minimum production cost of steel, given the raw materials they can get and their prices, almost instantly. SCOOP differentiates itself from producers own ma-

thematical models by providing real-time solutions taking into account the price, availability and supply of raw materials, the thermodynamic properties of each production phase and the operational and logistical constraints of production sites.

→ *Advanced optimization techniques*

SCOOP is an application designed with the latest optimization techniques and software that allow extremely fast calculations.

With a complete data set, it takes only a few seconds to run the model.

→ *A technical and economical model*

SCOOP combines technical and economical approaches, so that the results obtained take into account technical as well as market restrictions. Thermodynamics are widely considered into the model, besides prices, demand and commercial conditions. As the two

elements are essential in order to get reliable results, N-SIDE has developed a model that can consider technical and economical data simultaneously: a huge progress for industrial modeling.

→ *An integrated approach*

A steel company consists in several different units, usually run independently. Because the quality of steel depends on all stages of production, it is necessary to take into account the whole process. SCOOP uses a model that regroups all stages of integrated

steel works production. This global approach helps to get better optimization results, since the constraints inherent to each production unit are considered simultaneously.

→ *Fast and easy*

SCOOP is a user friendly tool, controlled through a very handy and intuitive interface. Once all the available materials and costs are put into the system, you only need to click on the "run" button: the application shows you in a few seconds the minimum production

cost of steel and the material mix needed to reach that optimum. In a very fast moving market, SCOOP is an easy way to save time and money.

THE BENEFITS

→ *Reduce your production costs*

The first and most visible advantage brought by SCOOP is a reduction of steel production costs. Thanks to the advanced mathematical techniques used in SCOOP, you can save from 2 to 5 euros per ton of steel, and approximately the same thanks to the integrative approach. On the whole, this means a total gain of about 5 euros per ton of steel produced, a huge saving if you consider the volumes of steel produced per year.

→ *Improve your knowledge management*

Besides financial aspects, SCOOP is an excellent tool for adding value to your steel business. As a steel company must deal with a spread of separated units, it is hard to get collaboration between them all. SCOOP allows to perform simulations for the entire production site, which is a powerful way for new engineers to understand quickly the knowledge accumulated by their predecessors. It is also very useful to get a common data base and language between the different staffs: as they all talk about the same processes, prices and quantities, decisions can be made more quickly and efficiently.

→ *Simulate new scenarios in seconds*

Thanks to SCOOP, it is possible to test at any time new production scenarios. You plan to deal with a new supplier, with new materials, machines or compositions? Just put it through SCOOP, and it will inform you about the profitability of the operation.

Others N-SIDE optimization tools dedicated to the steel industry

